

Amendments to the Claims

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

Claims 1 and 2 (Cancelled).

3 (Currently amended). ~~A-purified~~ An isolated interferon-gamma (IFN- γ) production inducing protein, which is a variant of an interferon-gamma (IFN- γ) production inducing protein, also known as IGIF and IL-18, and which has the following physicochemical properties:

- (1) Molecular weight
19,000 \pm 5,000 daltons on gel filtration and sodium dodecylsulfate polyacrylamide gel electrophoresis (SDS-PAGE);
- (2) Isoelectric point (pI)
4.8 \pm 1.0 on chromatofocusing;
- (3) Biological activity
Inducing the ~~interferon- γ~~ interferon-gamma (IFN- γ) production by immunocompetent cells, and activating the cytotoxicity of killer cells, where the activation is augmented by interleukin 2;
- (4) Partial amino acid sequence

Possessing a part or the whole of the amino acid sequence of SEQ ID NO:2, wherein the Xaa in SEQ ID NO:2 is Met or Thr,

(5) Purity

Exhibiting a single protein band when electrophoresed on sodium dodecylsulfate polyacrylamide gel electrophoresis (SDS-PAGE); and

(6) Assay

Being detected with a monoclonal antibody which binds to the ~~interferon- γ~~ interferon-gamma (IFN- γ) inducing polypeptide having an amino acid sequence of SEQ ID NO:2,

wherein said variant has an amino acid sequence which is at least 90% homologous to, ~~but different from~~ the amino acid sequence of SEQ ID NO:2, while substantially having the above biological activity (3).

4(Currently amended). The ~~purified~~ isolated protein according to claim 3, wherein said variant has at least one amino acid residue in SEQ ID NO:2 replaced with a different amino acid residue.

5(Currently amended). The ~~purified~~ isolated protein according to claim 3, wherein said variant has at least one amino acid residue deleted or added to the N-terminus of SEQ ID NO:2.

6(Previously presented). A pharmaceutical composition comprising a pharmaceutically-acceptable carrier and, as an active ingredient, the protein of claim 3.

7(Currently amended). A ~~purified~~ isolated interferon-gamma (IFN- γ) production inducing protein, also known as IGIF and IL-18, which has the amino acid sequence of SEQ ID NO:2, where Xaa represents methionine or threonine.

8(Currently amended). An isolated interferon-gamma (IFN- γ) production inducing agent which consists essentially of, as an effective ingredient, the protein of claim 7.

9(Original). A pharmaceutical composition comprising a pharmaceutically-acceptable carrier and, as an active ingredient, the protein of claim 7.

Claim 10 (Cancelled)

11(Currently amended). ~~A-purified~~ An isolated interferon-gamma (IFN- γ) production inducing protein, also known as IGIF and IL-18, which has the following physicochemical properties:

(1) Molecular weight

19,000±5,000 daltons on gel filtration and sodium dodecylsulfate polyacrylamide gel electrophoresis (SDS-PAGE);

(2) Isoelectric point (pI)

4.8 ± 1.0 on chromatofocusing;

(3) Biological activity

Inducing the ~~interferon- γ~~ interferon-gamma (IFN- γ) production by immunocompetent cells, and activating the cytotoxicity of killer cells, where the activation of cytotoxicity of killer cells being augmented by interleukin-2;

(4) Partial amino acid sequence

Possessing a part or the whole of the amino acid sequence of SEQ ID NO:2, wherein the Xaa in SEQ ID NO:2 is Met or Thr,

(5) Purity

Exhibiting a single protein band when electrophoresed on sodium dodecylsulfate polyacrylamide gel electrophoresis (SDS-PAGE); and

(6) Assay

Being detected with a monoclonal antibody which binds to the interferon- γ inducing polypeptide having an amino acid sequence of SEQ ID NO:2,

and which ~~reacts with~~ binds to a monoclonal antibody specific to an interferon-gamma (IFN- γ) production inducing protein having the amino acid sequence of SEQ ID NO:2 or ~~a sequence variant of the protein~~ having an amino acid sequence which is at least 90% homologous to, ~~but different from~~ the amino acid sequence of SEQ ID NO:2, while substantially having the above biological activity (3).

Claims 12 and 13 (Cancelled)

14 (Currently amended). ~~A purified~~ An isolated interferon-gamma (IFN- γ) production inducing protein capable of inducing interferon-gamma (IFN- γ) production by immunocompetent cells, wherein said protein is encoded by a DNA sequence which hybridizes to an oligonucleotide probe of SEQ ID NO:5 under the hybridization conditions of 5 x SSPE, 5 x Denhardt's solution, 0.5 w/v% SDS, 100 μ g/ml denatured salmon sperm DNA, and 45°C and after being washed with 6 x SSC and said protein has the following physicochemical properties:

(1) Molecular weight

19,000 \pm 5,000 daltons on gel filtration and sodium dodecylsulfate polyacrylamide gel electrophoresis (SDS-PAGE);

(2) Isoelectric point (pI)

4.8 \pm 1.0 on chromatofocusing;

(3) Biological activity

Inducing the ~~interferon- γ~~ interferon-gamma (IFN- γ)
production by immunocompetent cells, and
activating the cytotoxicity of killer cells, where
the activation is augmented by interleukin 2;

(4) Partial amino acid sequence

Possessing a part or the whole of the amino acid
sequence of SEQ ID NO:2, wherein the Xaa in SEQ ID
NO:2 is Met or Thr,

(5) Purity

Exhibiting a single protein band when
electrophoresed on sodium dodecylsulfate
polyacrylamide gel electrophoresis (SDS-PAGE); and

(6) Assay

Being detected with a monoclonal antibody which
binds to the interferon- γ inducing polypeptide
having an amino acid sequence of SEQ ID NO:2,

wherein said protein has an amino acid sequence which is at least
90% homologous to, ~~but different from~~ the amino acid sequence of
SEQ ID NO:2, while substantially having the above biological
activity (3).

15 (Cancelled).

16(Currently amended). An isolated interferon-gamma (IFN- γ) production inducing protein, also known as IGIF and IL-18, which substantially retains its interferon-gamma (IFN- γ) production inducing activity even after treatment with SDS-PAGE, said protein having the following physicochemical properties:

(1) Molecular weight

19,000 \pm 5,000 daltons on gel filtration and sodium dodecylsulfate polyacrylamide gel electrophoresis (SDS-PAGE);

(2) Isoelectric point (pI)

4.8 \pm 1.0 on chromatofocusing;

(3) Biological activity

Inducing the ~~interferon- γ~~ interferon-gamma (IFN- γ) production by immunocompetent cells, and activating the cytotoxicity of killer cells, where the activation is augmented by interleukin 2;

(4) Partial amino acid sequence

Possessing a part or the whole of the amino acid sequence of SEQ ID NO:2, wherein the Xaa in SEQ ID NO:2 is Met or Thr,

(5) Purity

Exhibiting a single protein band when electrophoresed on sodium dodecylsulfate polyacrylamide gel electrophoresis (SDS-PAGE); and

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(6) Assay

Being detected with a monoclonal antibody which
binds to the interferon- γ inducing polypeptide
having an amino acid sequence of SEQ ID NO:2,
wherein said protein has an amino acid sequence which is at least
90% homologous to, ~~but different from~~ the amino acid sequence of
SEQ ID NO:2, while substantially having the above biological
activity (3).

17(Cancelled).